



FREQUENTLY ASKED QUESTIONS ABOUT MOLD

What is mold and what causes it to grow?

Molds are types of fungi that can be found almost anywhere – indoors and out. There are many different types of molds and they can be found even in the cleanest houses. Some of the common molds found indoors are known as *Cladosporium*, *Penicillium*, and *Aspergillus*. When environmental conditions are dry and cool, molds produce spores, which spread through the air and land on new surfaces to grow. When there is a lot of moisture or high humidity and temperatures are above 65°F, the mold spores become active and start to grow rapidly. Molds may grow on walls, ceilings, mattresses, furniture, clothing, toys and many other items. Some household conditions that may lead to mold growth include clogged gutters, leaky plumbing or roofs, and using hot water without venting the steam to outdoor air. If there is mold growing in your home, there is most likely a moisture or water problem.

Why is mold a problem after a flood?

Floods provide ideal conditions for rapid mold growth in houses, apartments, and other buildings. Floodwaters are absorbed by porous surfaces which act like sponges. Soaked objects are an ideal environment for mold growth because molds and other microorganisms penetrate deeply into wet materials. As materials dry out, the moisture that evaporates from them keeps the humidity in a home or apartment very high, providing a perfect environment for molds to grow on walls and other surfaces. Closed-up buildings trap moisture inside and also provide favorable mold growing conditions. Mold problems are exacerbated after flood events because buildings are often closed-up for days or weeks before anyone can get in to clean them.

What are signs that mold may be growing in my home?

Molds usually look like small, speckled spots scattered over a surface, and they may be black, brown, green, white, pink, orange, or almost any other color. In time, the number and size of spots increase, and a surface may become completely covered with mold. Molds have a musty or mildew, earth-like smell. Molded surfaces often look slick or slimy.

How can I tell whether I have mold or dirt on my walls?

Sometimes it can be difficult to tell the difference. Spraying the discoloration with a bleach solution can help. If it is mold, it will usually disappear or become much fainter. If it is dirt, the discoloration will usually remain even after bleaching.

What are the health effects of mold?

Some people are more affected by mold than others. Some people can live in places with a large amount of mold and not be bothered by it. Allergic reaction is the most commonly reported health effect of mold exposure. If you cough, wheeze, or have difficulty breathing around mold, you may be sensitive to certain molds. If continuously exposed to mold, some people may develop allergy-like symptoms, including watery, itchy, burning or red eyes; runny or stuffy nose or sinuses; nose or throat irritation; sneezing; coughing or wheezing; constant headaches, memory problems or mood changes; aches and pains; and in some cases, hives, welts, or skin rash. Mold spores cannot be seen but can be inhaled, which can cause irritation or infection in the lungs and make it harder to breathe. Some molds produce toxins that affect people differently.

Are there certain groups that are more susceptible to health effects of mold?

Yes – some people are more likely to experience symptoms around molds. These include young children, the elderly, pregnant women, and people with asthma or other respiratory diseases. People with suppressed immune systems and those who are very allergic should avoid heavy mold infestations. If possible, these susceptible individuals should not live in buildings where mold is growing and should consult their family doctor if symptoms develop.

Are black molds more harmful than other molds?

Black is a **very common color** for molds, but not all black molds are harmful. At least one mold species, *Stachybotrys* (Stacky-bo-tress), can produce toxins under very specific circumstances. *Stachybotrys* is not a very common mold, and appears as a slimy, black mold with white edges. In cases where *Stachybotrys* was thought to have made people sick, other molds and additional factors were also present that may have been responsible for symptoms experienced. There have been a few reported outbreaks of pulmonary hemosiderosis (bleeding from the lungs) in children, and very high levels of *Stachybotrys* were present in the buildings where these children lived.

What can I do to control molds once I re-enter my flooded house or apartment?

Eliminate all household items which have been water soaked, such as soft furniture, mattresses, carpeting, and anything else that can absorb water and cannot be adequately cleaned. This includes furniture made of pressboard (also known as particleboard or chipboard). Wooden items made of plywood should be discarded. Items that can be thoroughly washed or dry cleaned can be kept after cleaning. In general, porous items such as paper, cardboard boxes, cloth, wallboard, foam rubber, and stuffing in furniture and toys can trap mold spores. **Just letting items dry out will not remove the mold and mold will grow again anytime there is enough moisture in the air, such as on humid days.** Hard surface materials such as glass, metal, and plastic, including kitchen utensils can be kept after they are thoroughly washed in hot, soapy water. Any wooden items used to prepare, serve, or contain food should be discarded.

What should I do about the floors, walls, and ceilings after flood events?

Vinyl floors, drywall, insulation, and in some cases ceilings should be removed and replaced if mold is present. It takes a long time for water under vinyl floors and in the walls to dry out.

While they are wet, water can spread up the walls and insulation much higher than the flood water level due to a process called “wicking”. As a result, mold quickly develops in areas where water has spread. Once mold is established in drywall and insulation, it will continue to grow in the future when humidity is high enough. Just sealing the surface with paint, polyurethane, or fiberglass is not adequate. Removing the drywall and insulation is the only way to determine the extent of wicking. All water-damaged materials should be removed and discarded; however, hard surfaces that can be washed and treated with a bleach solution can stay in the home.

After drywall and insulation are removed, you should wait until the remaining wood or other building materials in the walls are thoroughly dry. You should increase air circulation and use dehumidifiers to speed up the drying process. Replacing the wall before it is thoroughly dry can result in potential mold problems and structural damage. The most accurate way to determine when the wall can be replaced is to test the wood with a moisture meter.

Can heating and cooling systems be contaminated with mold?

Yes – the ductwork that carries hot or cold air, the blowers, and air handlers can become contaminated if they are under water. Air ducts that are made of sheet metal, or sheet metal with fiberglass insulation on the outside, can be cleaned and disinfected. Air ducts that are made entirely of fiberglass, or have interior fiberglass insulation may have to be removed and replaced. Furnaces and other air handling equipment may also need to be replaced. We recommend contacting a qualified heating and cooling contractor in your area to address this issue.

How do I get rid of mold in my home?

You should clean up the mold and resolve any water or moisture problems. Mold and mildew can be removed with one cup of ordinary household laundry bleach in one gallon of water. **Never mix chlorine bleach of any type with ammonia as the mixture produces toxic fumes.** The bleach solution should remain in contact with the surface for at least two minutes; afterwards, the surface should be rinsed with water. You should also wear long clothing, a head cover, waterproof boots, heavy rubber gloves and safety goggles. The most important protection is to wear a particle-filtering mask, which should be a 3-M N95 particle removal mask or the equivalent which is capable of filtering particulates equal to or larger than 0.3 microns. These same protective measures should be taken if you are ripping out vinyl floors, drywall, or insulation. Hardwood floors and woodwork may be cleaned with a phosphate cleaning solution such as trisodium phosphate.

The steps you can take to reduce moisture is to use air conditioners and/or dehumidifiers; inspect and repair the ventilation system; maintain indoor humidity at 30 to 60 percent; use exhaust fans to circulate indoor moisture (from cooking, dishwashing, showering) to the outdoors; and remove carpeting in areas of excess moisture (from cooking, sinks, bathtubs and showers).

Can ozone air cleaners help remove mold?

No – ozone has been used to disinfect water and in some cases to eliminate odors. However, ozone can also irritate the lungs and is not always effective at controlling mold. We recommend that you avoid using an ozone generator in any occupied air space.

Should I seek professional help to get rid of mold in my home?

For large areas covered with mold, it is best to seek help from a professional. The Commonwealth of Virginia does not require contractors be licensed to clean mold. Contractors should be able to provide a list of referrals and may also hold certifications from private industrial hygiene associations.

Should I have my home sampled for mold?

No - testing for indoor molds can be cost prohibitive and is not generally recommended by the Centers for Disease Control and Prevention and the Environmental Protection Agency. There are no federal or state standards for indoor mold levels, and air concentrations of molds cannot be interpreted with regard to health risks. In addition, it is nearly impossible to completely eliminate all molds, so any testing will likely find at least some molds. After having your house cleaned, if you see or smell mold again, you should continue to clean it. If you no longer see visible signs of mold or smell musty odors, you have probably done an adequate job of cleaning your house for mold.

Does the health department provide remediation, inspection, or testing for mold problems?

No - county and state public health departments do not have the resources to provide remediation, inspection, or testing for mold problems in homes or schools, and cannot provide recommendations with regard to remediation professionals.

What if I have further questions?

1. If you have concerns about your health and mold exposure, contact your healthcare provider.
2. Call your local health department. A directory of local health departments is located at <http://www.vdh.virginia.gov/LHD/index.htm>
3. Write the Division of Environmental Epidemiology, 109 Governor Street, 4th Floor, Richmond, VA 23219, or call (804) 864-8182.